




From: Dave Larsen <dlarsen@reiengineering.com>
Sent: Thursday, October 24, 2019 1:43 PM
To: Stoltz, Carrie R - DNR
Subject: Tower Standard - abandonment forms
Attachments: Abandonment forms.pdf; REI_20191024_134349.pdf

Carrie, well abandonment forms for the six wells we were able to abandon on Tuesday. I also provided copies of the original well construction forms for your reference.

Thank you,
David N. Larsen P.G.
Senior Hydrogeologist / Professional Geologist



Connect with us :   

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Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

Page 1 of 2

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☐ Verification Only of Fill and Seal

Route to DNR Bureau:

☐ Drinking Water ☐ Watershed/Wastewater ☒ Remediation/Redevelopment
☐ Waste Management ☐ Other: _____

1. Well Location Information

County Vilas	WI Unique Well # of Removed Well MW18	Hicap #
Latitude / Longitude (see instructions) N W	Format Code <input type="checkbox"/> DD <input type="checkbox"/> DDM	Method Code <input type="checkbox"/> GPS008 <input type="checkbox"/> SCR002 <input type="checkbox"/> OTH001
1/4 1/4 SE 1/4 SW or Gov't Lot #	Section 30	Township 40 N
	Range 05 E W	
Well Street Address 14627 State Highway 70 West		
Well City, Village or Town Lac du Flambeau		Well ZIP Code 54538
Subdivision Name		Lot #

2. Facility / Owner Information

Facility Name Tower Standard		
Facility ID (FID or PWS)		
License/Permit/Monitoring #		
Original Well Owner Tower Standard		
Present Well Owner Tower Standard		
Mailing Address of Present Owner 14267 State Highway 70 West		
City of Present Owner Lac du Flambeau	State WI	ZIP Code 54538

Reason for Removal from Service
Completed Investigation

WI Unique Well # of Replacement Well

3. Filled & Sealed Well / Drillhole / Borehole Information

<input checked="" type="checkbox"/> Monitoring Well	Original Construction Date (mm/dd/yyyy) 11-3-15
<input type="checkbox"/> Water Well	
<input type="checkbox"/> Borehole / Drillhole	If a Well Construction Report is available, please attach.
Construction Type: <input checked="" type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug <input type="checkbox"/> Other (specify): _____	

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.) **17.41** Casing Diameter (in.) **2.07**

Lower Drillhole Diameter (in.) **8.25** Casing Depth (ft.) **7.41**

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown

If yes, to what depth (feet)? Depth to Water (feet) **9.16**

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Liner(s) removed?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Liner(s) perforated?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Screen removed?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
Casing left in place?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Was casing cut off below surface?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Did sealing material rise to surface?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Did material settle after 24 hours?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
If yes, was hole retopped?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A

Required Method of Placing Sealing Material

☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☒ Screened & Poured (Bentonite Chips) ☐ Other (Explain): _____

Sealing Materials

☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☐ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:

☒ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Surface	17.41	0.5 sack	

5. Material Used to Fill Well / Drillhole

Bentonite Chips	Surface	17.41	0.5 sack	

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing Gestra Engineering, Inc	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy) 10-22-19	DNR Use Only	
Street or Route 191 W Edgerton Ave	Telephone Number (414) 933-7444	Comments	Date Received	Noted By
City Milwaukee	State WI	ZIP Code 53207	Signature of Person Doing Work 	Date Signed 11/24/19

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

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☐ Verification Only of Fill and Seal

Route to DNR Bureau:

☐ Drinking Water ☐ Watershed/Wastewater ☒ Remediation/Redevelopment
☐ Waste Management ☐ Other: _____

1. Well Location Information

County Vilas	WI Unique Well # of Removed Well MW19	Hicap #
Latitude / Longitude (see instructions) N W	Format Code <input type="checkbox"/> DD <input type="checkbox"/> DDM	Method Code <input type="checkbox"/> GPS008 <input type="checkbox"/> SCR002 <input type="checkbox"/> OTH001
1/4 SE 1/4 SW or Gov't Lot #	Section 30	Township 40 N
Well Street Address 14627 State Highway 70 West	Range 05 E	Well ZIP Code 54538
Well City, Village or Town Lac du Flambeau	Lot #	
Subdivision Name		

2. Facility / Owner Information

Facility Name Tower Standard
Facility ID (FID or PWS)
License/Permit/Monitoring #
Original Well Owner Tower Standard
Present Well Owner Tower Standard
Mailing Address of Present Owner 14267 State Highway 70 West
City of Present Owner Lac du Flambeau
State WI
ZIP Code 54538

Reason for Removal from Service
Completed Investigation

3. Filled & Sealed Well / Drillhole / Borehole Information

<input checked="" type="checkbox"/> Monitoring Well	WI Unique Well # of Replacement Well
<input type="checkbox"/> Water Well	Original Construction Date (mm/dd/yyyy) 11-3-15
<input type="checkbox"/> Borehole / Drillhole	If a Well Construction Report is available, please attach.
Construction Type: <input checked="" type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug <input type="checkbox"/> Other (specify): _____	

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.) **16.54** Casing Diameter (in.) **2.07**

Lower Drillhole Diameter (in.) **8.25** Casing Depth (ft.) **6.54**

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown

If yes, to what depth (feet)? Depth to Water (feet) **8.23**

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Liner(s) removed?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Liner(s) perforated?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Screen removed?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
Casing left in place?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Was casing cut off below surface?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Did sealing material rise to surface?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Did material settle after 24 hours?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
If yes, was hole retopped?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A

Required Method of Placing Sealing Material

☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☒ Screened & Poured (Bentonite Chips) ☐ Other (Explain): _____

Sealing Materials

☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☐ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:

☒ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole

	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Bentonite Chips	Surface	16.54	0.5 sack	

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing Gestra Engineering, Inc	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy) 10-22-19	DNR Use Only	
Street or Route 191 W Edgerton Ave	Telephone Number (414) 933-7444	Comments	Date Received	Noted By
City Milwaukee	State WI	ZIP Code 53207	Signature of Person Doing Work <i>[Signature]</i>	Date Signed 10/24/19

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

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☐ Verification Only of Fill and Seal

Route to DNR Bureau:

☐ Drinking Water ☐ Watershed/Wastewater ☒ Remediation/Redevelopment
☐ Waste Management ☐ Other: _____

1. Well Location Information

County Vilas	WI Unique Well # of Removed Well MW21	Hicap #
Latitude / Longitude (see instructions) _____ N _____ W	Format Code <input type="checkbox"/> DD <input type="checkbox"/> DDM	Method Code <input type="checkbox"/> GPS008 <input type="checkbox"/> SCR002 <input type="checkbox"/> OTH001
1/4 1/4 SE 1/4 SW or Gov't Lot #	Section 30	Township 40 N
Well Street Address 14627 State Highway 70 West	Range 05 E	Original Well Owner Tower Standard
Well City, Village or Town Lac du Flambeau	Well ZIP Code 54538	Present Well Owner Tower Standard
Subdivision Name	Lot #	Mailing Address of Present Owner 14267 State Highway 70 West

2. Facility / Owner Information

Facility Name Tower Standard		
Facility ID (FID or PWS)		
License/Permit/Monitoring #		
Original Well Owner Tower Standard		
Present Well Owner Tower Standard		
Mailing Address of Present Owner 14267 State Highway 70 West		
City of Present Owner Lac du Flambeau	State WI	ZIP Code 54538

Reason for Removal from Service
Completed Investigation

WI Unique Well # of Replacement Well

3. Filled & Sealed Well / Drillhole / Borehole Information

☒ Monitoring Well
☐ Water Well
☐ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy)
11-3-15

If a Well Construction Report is available,
please attach.

Construction Type:

☒ Drilled ☐ Driven (Sandpoint) ☐ Dug
☐ Other (specify): _____

Formation Type:

☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.)
14.55

Casing Diameter (in.)
2.07

Lower Drillhole Diameter (in.)
8.25

Casing Depth (ft.)
4.55

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown

If yes, to what depth (feet)?

Depth to Water (feet)
6.77

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed? ☐ Yes ☐ No ☒ N/A
Liner(s) removed? ☐ Yes ☐ No ☒ N/A
Liner(s) perforated? ☐ Yes ☐ No ☒ N/A
Screen removed? ☐ Yes ☒ No ☐ N/A
Casing left in place? ☒ Yes ☐ No ☐ N/A
Was casing cut off below surface? ☒ Yes ☐ No ☐ N/A
Did sealing material rise to surface? ☒ Yes ☐ No ☐ N/A
Did material settle after 24 hours? ☐ Yes ☒ No ☐ N/A
If yes, was hole retopped? ☐ Yes ☐ No ☒ N/A
If bentonite chips were used, were they hydrated
with water from a known safe source? ☐ Yes ☒ No ☐ N/A

Required Method of Placing Sealing Material

☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☒ Screened & Poured (Bentonite Chips) ☐ Other (Explain): _____

Sealing Materials

☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☐ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:

☒ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole

	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Bentonite Chips	Surface	14.55	0.5 sack	

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing Gestra Engineering, Inc	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy) 10-22-19	DNR Use Only	
Street or Route 191 W Edgerton Ave	Telephone Number (414) 933-7444	Comments	Date Received	Noted By
City Milwaukee	State WI	ZIP Code 53207	Signature of Person Doing Work 	Date Signed 10/24/19

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

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<input type="checkbox"/> Verification Only of Fill and Seal	Route to DNR Bureau:		
	<input type="checkbox"/> Drinking Water	<input type="checkbox"/> Watershed/Wastewater	<input checked="" type="checkbox"/> Remediation/Redevelopment
	<input type="checkbox"/> Waste Management	<input type="checkbox"/> Other: _____	

1. Well Location Information

County Vilas	WI Unique Well # of Removed Well MW22	Hicap #
Latitude / Longitude (see instructions) N _____ W _____		Format Code <input type="checkbox"/> DD <input type="checkbox"/> DDM
Method Code <input type="checkbox"/> GPS008 <input type="checkbox"/> SCR002 <input type="checkbox"/> OTH001		
1/4 / 1/4 SE 1/4 SW or Gov't Lot #	Section 30	Township 40 N
	Range 05 E	<input type="checkbox"/> W
Well Street Address 14627 State Highway 70 West		
Well City, Village or Town Lac du Flambeau		Well ZIP Code 54538
Subdivision Name		Lot #

2. Facility / Owner Information

Facility Name Tower Standard		
Facility ID (FID or PWS)		
License/Permit/Monitoring #		
Original Well Owner Tower Standard		
Present Well Owner Tower Standard		
Mailing Address of Present Owner 14267 State Highway 70 West		
City of Present Owner Lac du Flambeau	State WI	ZIP Code 54538

Reason for Removal from Service Completed Investigation	WI Unique Well # of Replacement Well
--	--------------------------------------

3. Filled & Sealed Well / Drillhole / Borehole Information

<input checked="" type="checkbox"/> Monitoring Well	Original Construction Date (mm/dd/yyyy) 11-3-15
<input type="checkbox"/> Water Well	
<input type="checkbox"/> Borehole / Drillhole	
If a Well Construction Report is available, please attach.	

Construction Type:		
<input checked="" type="checkbox"/> Drilled	<input type="checkbox"/> Driven (Sandpoint)	<input type="checkbox"/> Dug
<input type="checkbox"/> Other (specify): _____		

Formation Type:	
<input checked="" type="checkbox"/> Unconsolidated Formation	<input type="checkbox"/> Bedrock

Total Well Depth From Ground Surface (ft.) 14.46	Casing Diameter (in.) 2.07
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Lower Drillhole Diameter (in.) 8.25	Casing Depth (ft.) 4.46
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Was well annular space grouted?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
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If yes, to what depth (feet)?	Depth to Water (feet) 6.74
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4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Liner(s) removed?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Liner(s) perforated?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Screen removed?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
Casing left in place?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Was casing cut off below surface?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Did sealing material rise to surface?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Did material settle after 24 hours?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
If yes, was hole retopped?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A

Required Method of Placing Sealing Material	
<input type="checkbox"/> Conductor Pipe-Gravity	<input type="checkbox"/> Conductor Pipe-Pumped
<input checked="" type="checkbox"/> Screened & Poured (Bentonite Chips)	<input type="checkbox"/> Other (Explain): _____

Sealing Materials	
<input type="checkbox"/> Neat Cement Grout	<input type="checkbox"/> Concrete
<input type="checkbox"/> Sand-Cement (Concrete) Grout	<input type="checkbox"/> Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:	
<input checked="" type="checkbox"/> Bentonite Chips	<input type="checkbox"/> Bentonite - Cement Grout
<input type="checkbox"/> Granular Bentonite	<input type="checkbox"/> Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole

	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Bentonite Chips	Surface	14.46	0.5 sack	

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing Gestra Engineering, Inc			License #	Date of Filling & Sealing or Verification (mm/dd/yyyy) 10-22-19	DNR Use Only	
Street or Route 191 W Edgerton Ave			Telephone Number (414) 933-7444		Date Received	Noted By
City Milwaukee			State WI	ZIP Code 53207	Signature of Person Doing Work 	
					Date Signed 10/24/19	

Well / Drillhole / Borehole Filling & Sealing Report

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Verification Only of Fill and Seal

Route to DNR Bureau:

- ☐ Drinking Water ☐ Watershed/Wastewater ☒ Remediation/Redevelopment
☐ Waste Management ☐ Other: _____

1. Well Location Information

County Vilas	WI Unique Well # of Removed Well MW19@35-40	Hicap #
Latitude / Longitude (see instructions) N W	Format Code <input type="checkbox"/> DD <input type="checkbox"/> DDM	Method Code <input type="checkbox"/> GPS008 <input type="checkbox"/> SCR002 <input type="checkbox"/> OTH001
1/4 SE 1/4 SW or Gov't Lot #	Section 30	Township 40 N
Well Street Address 14627 State Highway 70 West	Range 05 E	Well ZIP Code 54538
Well City, Village or Town Lac du Flambeau	Lot #	
Subdivision Name		

2. Facility / Owner Information

Facility Name Tower Standard		
Facility ID (FID or PWS)		
License/Permit/Monitoring #		
Original Well Owner Tower Standard		
Present Well Owner Tower Standard		
Mailing Address of Present Owner 14267 State Highway 70 West		
City of Present Owner Lac du Flambeau	State WI	ZIP Code 54538

Reason for Removal from Service Completed Investigation	WI Unique Well # of Replacement Well
--	--------------------------------------

3. Filled & Sealed Well / Drillhole / Borehole Information

<input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Water Well <input type="checkbox"/> Borehole / Drillhole	Original Construction Date (mm/dd/yyyy) 11-5-15
If a Well Construction Report is available, please attach.	
Construction Type: <input checked="" type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug <input type="checkbox"/> Other (specify): _____	
Formation Type: <input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock	
Total Well Depth From Ground Surface (ft.) 40	Casing Diameter (in.) 2.07
Lower Drillhole Diameter (in.) 8.25	Casing Depth (ft.) 35
Was well annular space grouted? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	
If yes, to what depth (feet)?	Depth to Water (feet) 8.05

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Liner(s) removed?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Liner(s) perforated?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Screen removed?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
Casing left in place?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Was casing cut off below surface?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Did sealing material rise to surface?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Did material settle after 24 hours?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
If yes, was hole retopped?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Required Method of Placing Sealing Material <input type="checkbox"/> Conductor Pipe-Gravity <input checked="" type="checkbox"/> Conductor Pipe-Pumped <input type="checkbox"/> Screened & Poured (Bentonite Chips) <input type="checkbox"/> Other (Explain): _____	
Sealing Materials <input type="checkbox"/> Neat Cement Grout <input type="checkbox"/> Concrete <input type="checkbox"/> Sand-Cement (Concrete) Grout <input type="checkbox"/> Bentonite Chips	
For Monitoring Wells and Monitoring Well Boreholes Only: <input type="checkbox"/> Bentonite Chips <input checked="" type="checkbox"/> Bentonite - Cement Grout <input type="checkbox"/> Granular Bentonite <input type="checkbox"/> Bentonite - Sand Slurry	

5. Material Used to Fill Well / Drillhole

From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Surface	40	9 Gallons	5/6 Bentonite 74 lbs Portland 8.5 gallons water

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing Gestra Engineering, Inc	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy) 10-22-19	Date Received	Noted By
Street or Route 191 W Edgerton Ave	Telephone Number (414) 933-7444	Comments		
City Milwaukee	State WI	ZIP Code 53207	Signature of Person Doing Work <i>[Signature]</i>	Date Signed 10/24/19

Well / Drillhole / Borehole Filling & Sealing Report

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☐ Verification Only of Fill and Seal

Route to DNR Bureau:

☐ Drinking Water ☐ Watershed/Wastewater ☒ Remediation/Redevelopment
☐ Waste Management ☐ Other: _____

1. Well Location Information

County Vilas	WI Unique Well # of Removed Well MW22@35-40	Hicap #
Latitude / Longitude (see instructions) _____ N _____ W	Format Code <input type="checkbox"/> DD <input type="checkbox"/> DDM	Method Code <input type="checkbox"/> GPS008 <input type="checkbox"/> SCR002 <input type="checkbox"/> OTH001
1/4 1/4 SE 1/4 SW or Gov't Lot #	Section 30	Township 40 N
Well Street Address 14627 State Highway 70 West	Range <input checked="" type="checkbox"/> E <input type="checkbox"/> W	Well ZIP Code 54538
Well City, Village or Town Lac du Flambeau	Well ZIP Code 54538	
Subdivision Name	Lot #	
Reason for Removal from Service Completed Investigation	WI Unique Well # of Replacement Well	

2. Facility / Owner Information

Facility Name Tower Standard
Facility ID (FID or PWS)
License/Permit/Monitoring #
Original Well Owner Tower Standard
Present Well Owner Tower Standard
Mailing Address of Present Owner 14267 State Highway 70 West
City of Present Owner Lac du Flambeau
State WI
ZIP Code 54538

3. Filled & Sealed Well / Drillhole / Borehole Information

<input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Water Well <input type="checkbox"/> Borehole / Drillhole	Original Construction Date (mm/dd/yyyy) 11-3-15
If a Well Construction Report is available, please attach.	
Construction Type: <input checked="" type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug <input type="checkbox"/> Other (specify): _____	
Formation Type: <input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock	
Total Well Depth From Ground Surface (ft.) 40	Casing Diameter (in.) 2.07
Lower Drillhole Diameter (in.) 8.25	Casing Depth (ft.) 34.5
Was well annular space grouted? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	
If yes, to what depth (feet)?	Depth to Water (feet) 8.05

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Liner(s) removed?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Liner(s) perforated?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Screen removed?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
Casing left in place?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Was casing cut off below surface?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Did sealing material rise to surface?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Did material settle after 24 hours?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
If yes, was hole retopped?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A

Required Method of Placing Sealing Material

<input type="checkbox"/> Conductor Pipe-Gravity	<input checked="" type="checkbox"/> Conductor Pipe-Pumped
<input type="checkbox"/> Screened & Poured (Bentonite Chips)	<input type="checkbox"/> Other (Explain): _____

Sealing Materials

<input type="checkbox"/> Neat Cement Grout	<input type="checkbox"/> Concrete
<input type="checkbox"/> Sand-Cement (Concrete) Grout	<input type="checkbox"/> Bentonite Chips
For Monitoring Wells and Monitoring Well Boreholes Only:	
<input type="checkbox"/> Bentonite Chips	<input checked="" type="checkbox"/> Bentonite - Cement Grout
<input type="checkbox"/> Granular Bentonite	<input type="checkbox"/> Bentonite - Sand Slurry

From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Surface	40	9 Gallons	5lbs Bentonite
			94lbs Portland
			8.5 Gallons water

6. Comments

--

7. Supervision of Work

Supervision of Work			DNR Use Only	
Name of Person or Firm Doing Filling & Sealing Gestra Engineering, Inc	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy) 10-22-19	Date Received	Noted By
Street or Route 191 W Edgerton Ave	Telephone Number (414) 933-7444	Comments		
City Milwaukee	State WI	ZIP Code 53207	Signature of Person Doing Work	Date Signed

Route To Solid Waste ☐ Haz. Waste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐

Facility/Project Name Tower Standard	Local Grid Location of Well Feet S. _____ Feet W. _____ Feet N. _____ Feet E. _____	Well Name MW-18
Facility License Permit or Monitoring Number	Grid Origin Location	Wis. Unique Well Number _____ DNR Well Number _____
Type of Well Water Table Observation Well <input checked="" type="checkbox"/> 11 Piezometer <input type="checkbox"/> 12	Section Location of Waste/Source <input checked="" type="checkbox"/> E	Date Well Installed 11/3/15
Distance Well Is From Waste/Source Boundary Ft. _____	SE 1/4 of SW 1/4 of Sec. 30 T. 40 N. R. 05 <input type="checkbox"/> W	Well Installed By (Person's Name and Firm) PSI - Joe Black
Is Well A Point of Enforcement Std. Application <input type="checkbox"/> Yes <input type="checkbox"/> No	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	

A. Protective pipe, top elevation _____ ft. MSL
B. Well casing, top elevation _____ ft. MSL
C. Land surface elevation _____ ft. MSL
D. Surface seal, bottom _____ ft. MSL or _____ ft.

12. USCS Classification of soil near screen:

GP ☐ GM ☐ GC ☐ GW ☐ SW ☒ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis attached? ☐ Yes ☒ No

14. Drilling method used Rotary ☐ 50
Hollow Stem Auger ☒ 41
Other ☐

15. Drilling fluid used: Water ☐ 02 Air ☐ 01
Drilling Mud ☐ 03 None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No
Describe _____

17. Source of water (attach analysis):

E. Bentonite seal, top _____ ft. MSL or 0 ft.
F. Fine sand, top _____ ft. MSL or 5.41 ft.
G. Filter pack, top _____ ft. MSL or 6.41 ft.
H. Screen joint, top _____ ft. MSL or 7.41 ft.
I. Well bottom _____ ft. MSL or 17.41 ft.
J. Filter pack, bottom _____ ft. MSL or 17.41 ft.
K. Borehole, bottom _____ ft. MSL or 17.41 ft.
L. Borehole, diameter 8 in.
M. O.D. well casing 2.1 in.
N. I.D. well casing 1.9 in.

1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: _____ in.
b. Length: _____ ft.
c. Material: Steel ☒ 04
Other ☐
d. Additional protection? ☐ Yes ☒ No
If yes, describe: _____
3. Surface seal: Bentonite ☐ 30
Concrete ☒ 01
Other ☐
4. Material between well casing and protective pipe:
Bentonite ☒ 30
Annular space seal ☐
Other ☐
5. Annular space seal:
a. Granular Bentonite ☒ 33
b. _____ lbs/gal mud weight _____ Bentonite-sand slurry ☐ 35
c. _____ lbs/gal mud weight _____ Bentonite slurry ☐ 31
d. _____ %Bentonite _____ Bentonite-cement grout ☐ 50
e. 1.769 ft³ Volume added for any of the above
f. How installed: Tremie ☐ 01
Tremie pumped ☐ 02
Gravity ☒ 08
6. Bentonite seal:
a. Bentonite Granules ☐ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite pellets ☒ 32
c. _____ Other ☐
7. Fine sand material Manufacturer, product name and mesh size
a. #60 Red Flint
b. Volume added 0.327 ft³
8. Filter pack material: Manufacturer, product name and mesh size
a. #30 Red Flint
b. Volume added 3.27 ft³
9. Well casing: Flush threaded PVC schedule 40 ☒ 23
Flush threaded PVC schedule 80 ☐ 24
Other ☐
10. Screen material: PVC
a. Screen type: Factory cut ☒ 11
Continuous slot ☐ 01
Other ☐
b. Manufacturer: U.S. Filter
c. Slot size: _____ in.
d. Slotted length: 10 ft.
11. Backfill material (below filter Pack): None ☒ 14
Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowledge

Signature

Firm

REI Engineering, Inc.
4080 N. 20th Ave.
Wausau, WI 54401

Please complete both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs. 144, 147 and 160 Wis. Stats. and ch NR 141, Wis. Ad. Code. In accordance with ch. 144 Wis. Stats., failure to file this form may result in a forfeiture of not less than \$10, nor more than \$5000 for each day of violation. In accordance with ch. 147 Wis. Stats., failure to file this form may result in a forfeiture of not more than \$10,000 for each day of violation. NOTE: Shaded areas are for DNR use only. see instructions for more information including where the completed form should be sent.

Route To Solid Waste ☐ Haz. Waste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐

Facility/Project Name Tower Standard	Local Grid Location of Well Feet S. _____ Feet W. _____ Feet N. _____ Feet E. _____	Well Name MW-19
Facility License Permit or Monitoring Number	Grid Origin Location	Wis. Unique Well Number _____ DNR Well Number _____
Type of Well Water Table Observation Well <input checked="" type="checkbox"/> 11 Piezometer <input type="checkbox"/> 12	Section Location of Waste/Source <input checked="" type="checkbox"/> E	Date Well Installed 11/3/15
Distance Well Is From Waste/Source Boundary Ft. _____	SE 1/4 of SW 1/4 of Sec. 30 T. 40 N. R. 05 <input type="checkbox"/> W	Well Installed By (Person's Name and Firm) PSI - Joe Black
Is Well A Point of Enforcement Std. Application <input type="checkbox"/> Yes <input type="checkbox"/> No	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	

A. Protective pipe, top elevation _____ ft. MSL
B. Well casing, top elevation _____ ft. MSL
C. Land surface elevation _____ ft. MSL
D. Surface seal, bottom _____ ft. MSL or _____ ft.

12. USCS Classification of soil near screen:

GP ☐ GM ☐ GC ☐ GW ☐ SW ☒ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis attached? ☐ Yes ☒ No

14. Drilling method used Rotary ☐ 50
Hollow Stem Auger ☒ 41
Other ☐

15. Drilling fluid used: Water ☐ 02 Air ☐ 01
Drilling Mud ☐ 03 None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No

Describe _____

17. Source of water (attach analysis):

E. Bentonite seal, top _____ ft. MSL or 0 ft.

F. Fine sand, top _____ ft. MSL or 4.54 ft.

G. Filter pack, top _____ ft. MSL or 5.54 ft.

H. Screen joint, top _____ ft. MSL or 6.54 ft.

I. Well bottom _____ ft. MSL or 16.54 ft.

J. Filter pack, bottom _____ ft. MSL or 16.54 ft.

K. Borehole, bottom _____ ft. MSL or 16.54 ft.

L. Borehole, diameter 8 in.

M. O.D. well casing 2.1 in.

N. I.D. well casing 1.9 in.

1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: _____ in.
b. Length: _____ ft.
c. Material: Steel ☒ 04
Other ☐
d. Additional protection? ☐ Yes ☒ No
If yes, describe: _____

3. Surface seal: Bentonite ☐ 30
Concrete ☒ 01
Other ☐

4. Material between well casing and protective pipe:
Bentonite ☒ 30
Annular space seal ☐
Other ☐

5. Annular space seal:
a. Granular Bentonite ☒ 33
b. _____ Lbs/gal mud weight _____ Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight _____ Bentonite slurry ☐ 31
d. _____ %Bentonite _____ Bentonite-cement grout ☐ 50
e. 1.485 ft³ Volume added for any of the above
f. How installed: Tremie ☐ 01
Tremie pumped ☐ 02
Gravity ☒ 08

6. Bentonite seal:
a. Bentonite Granules ☐ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite pellets ☒ 32
c. _____ Other ☐

7. Fine sand material Manufacturer, product name and mesh size
a. #60 Red Flint
b. Volume added 0.327 ft³

8. Filter pack material: Manufacturer, product name and mesh size
a. #30 Red Flint
b. Volume added 3.27 ft³

9. Well casing: Flush threaded PVC schedule 40 ☒ 23
Flush threaded PVC schedule 80 ☐ 24
Other ☐

10. Screen material: PVC
a. Screen type: Factory cut ☒ 11
Continuous slot ☐ 01
Other ☐
b. Manufacturer U.S. Filter
c. Slot size: _____ in.
d. Slotted length: 10 ft.

11. Backfill material (below filter Pack): None ☒ 14
Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowledge

Signature _____

Firm REI Engineering, Inc.
4080 N. 20th Ave.
Wausau, WI 54401

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Route To Solid Waste ☐ Haz. Waste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐

Facility/Project Name Tower Standard	Local Grid Location of Well Feet S. Feet W. Feet N. Feet E.	Well Name MW-21
Facility License Permit or Monitoring Number	Grid Origin Location	Wis. Unique Well Number DNR Well Number
Type of Well Water Table Observation Well <input checked="" type="checkbox"/> 11 Piezometer <input type="checkbox"/> 12	Section Location of Waste/Source <input checked="" type="checkbox"/> B	Date Well Installed 11/3/15
Distance Well Is From Waste/Source Boundary Ft.	SE 1/4 of SW 1/4 of Sec. 30 T. 40 N. R. 05 <input type="checkbox"/> W	Well Installed By (Person's Name and Firm) PSI - Joe Black
Is Well A Point of Enforcement Std. Application <input type="checkbox"/> Yes <input type="checkbox"/> No	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	

A. Protective pipe, top elevation _____ ft. MSL
B. Well casing, top elevation _____ ft. MSL
C. Land surface elevation _____ ft. MSL
D. Surface seal, bottom _____ ft. MSL or _____ ft.

12. USCS Classification of soil near screen:

GP ☐ GM ☐ GC ☐ GW ☐ SW ☒ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis attached? ☐ Yes ☒ No

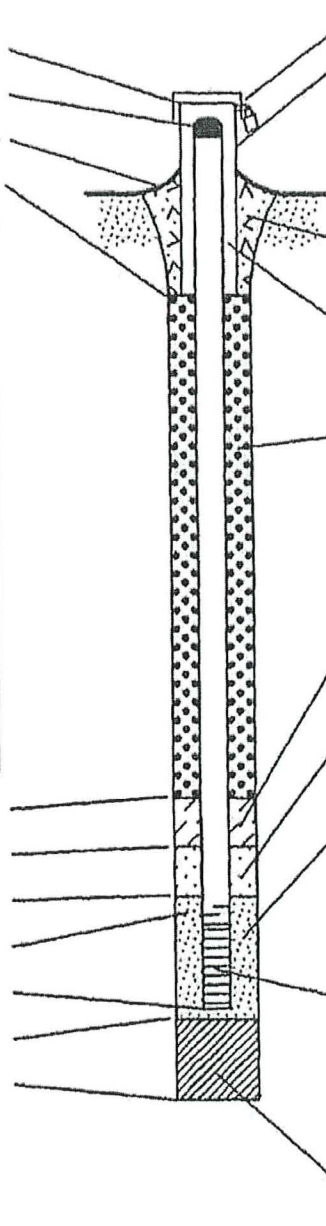
14. Drilling method used Rotary ☐ 50
Hollow Stem Auger ☒ 41
Other ☐

15. Drilling fluid used: Water ☐ 02 Air ☐ 01
Drilling Mud ☐ 03 None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No
Describe _____

17. Source of water (attach analysis):

E. Bentonite seal, top _____ ft. MSL or 0 ft.
F. Fine sand, top _____ ft. MSL or 2.55 ft.
G. Filter pack, top _____ ft. MSL or 3.55 ft.
H. Screen joint, top _____ ft. MSL or 4.55 ft.
I. Well bottom _____ ft. MSL or 14.55 ft.
J. Filter pack, bottom _____ ft. MSL or 14.55 ft.
K. Borehole, bottom _____ ft. MSL or 14.55 ft.
L. Borehole, diameter 8 in.
M. O.D. well casing 2.1 in.
N. I.D. well casing 1.9 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: _____ in.
b. Length: _____ ft.
c. Material: Steel ☒ 04
Other ☐
d. Additional protection? ☐ Yes ☒ No
If yes, describe: _____
3. Surface seal: Bentonite ☐ 30
Concrete ☒ 01
Other ☐
4. Material between well casing and protective pipe:
Bentonite ☒ 30
Annular space seal ☐
Other ☐
5. Annular space seal:
a. Granular Bentonite ☒ 33
b. _____ Lbs/gal mud weight _____ Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight _____ Bentonite slurry ☐ 31
d. _____ % Bentonite _____ Bentonite-cement grout ☐ 50
e. 0.834 ft³ Volume added for any of the above
f. How installed: Tremie ☐ 01
Tremie pumped ☐ 02
Gravily ☒ 08
6. Bentonite seal:
a. Bentonite Granules ☐ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite pellets ☒ 32
c. _____ Other ☐
7. Fine sand material Manufacturer, product name and mesh size
a. #60 Red Flint
b. Volume added 0.327 ft³
8. Filter pack material: Manufacturer, product name and mesh size
a. #30 Red Flint
b. Volume added 3.27 ft³
9. Well casing: Flush threaded PVC schedule 40 ☒ 23
Flush threaded PVC schedule 80 ☐ 24
Other ☐
10. Screen material: PVC
a. Screen type: Factory cut ☒ 11
Continuous slot ☐ 01
Other ☐
b. Manufacturer U.S. Filter
c. Slot size: _____ in.
d. Slotted length: 10 ft.
11. Backfill material (below filter pack): None ☒ 14
Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowledge

Signature _____

Firm

REI Engineering, Inc.
4080 N. 20th Ave.
Wausau, WI 54401

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Route To Solid Waste ☐ Haz. Waste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐

Facility/Project Name Tower Standard	Local Grid Location of Well Feet S. Feet W. Feet N. Feet E.	Well Name MW-22
Facility License Permit or Monitoring Number	Grid Origin Location	Wis. Unique Well Number DNR Well Number
Type of Well Water Table Observation Well <input checked="" type="checkbox"/> 11 Piezometer <input type="checkbox"/> 12	Section Location of Waste/Source <input checked="" type="checkbox"/> E	Date Well Installed 11/4/15
Distance Well Is From Waste/Source Boundary Ft.	SE 1/4 of SW 1/4 of Sec. 30 T. 40 N. R. 05 <input type="checkbox"/> W	Well Installed By (Person's Name and Firm) PSI - Joe Black
Is Well A Point of Enforcement Std. Application <input type="checkbox"/> Yes <input type="checkbox"/> No	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	

A. Protective pipe, top elevation _____ ft. MSL
B. Well casing, top elevation _____ ft. MSL
C. Land surface elevation _____ ft. MSL
D. Surface seal, bottom _____ ft. MSL or _____ ft.

12. USCS Classification of soil near screen:

GP ☐ GM ☐ GC ☐ GW ☐ SW ☒ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis attached? ☐ Yes ☒ No

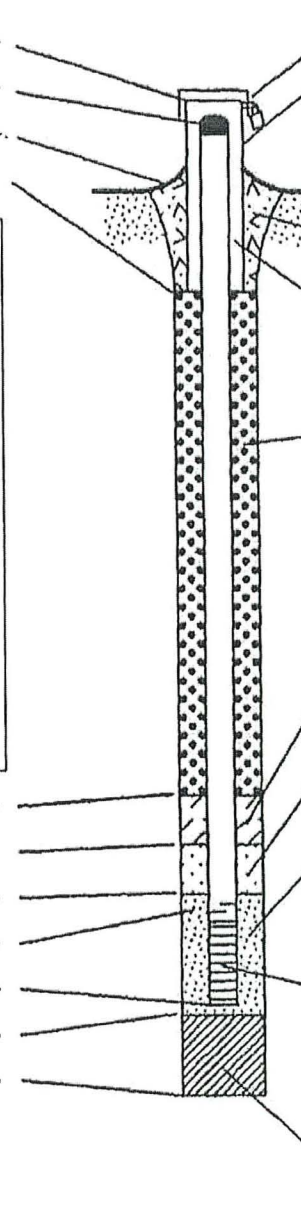
14. Drilling method used Rotary ☐ 50
Hollow Stem Auger ☒ 41
Other ☐

15. Drilling fluid used: Water ☐ 02 Air ☐ 01
Drilling Mud ☐ 03 None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No
Describe _____

17. Source of water (attach analysis):

E. Bentonite seal, top _____ ft. MSL or 0 ft.
F. Fine sand, top _____ ft. MSL or 2.46 ft.
G. Filter pack, top _____ ft. MSL or 3.46 ft.
H. Screen joint, top _____ ft. MSL or 4.46 ft.
I. Well bottom _____ ft. MSL or 14.46 ft.
J. Filter pack, bottom _____ ft. MSL or 14.46 ft.
K. Borehole, bottom _____ ft. MSL or 14.46 ft.
L. Borehole, diameter 8 in.
M. O.D. well casing 2.1 in.
N. I.D. well casing 1.9 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: _____ in.
b. Length: _____ ft.
c. Material: Steel ☒ 04
Other ☐
d. Additional protection? ☐ Yes ☒ No
If yes, describe: _____
3. Surface seal: Bentonite ☐ 30
Concrete ☒ 01
Other ☐
4. Material between well casing and protective pipe:
Bentonite ☒ 30
Annular space seal ☐
Other ☐
5. Annular space seal:
a. Granular Bentonite ☒ 33
b. _____ Lbs/gal mud weight Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight Bentonite slurry ☐ 31
d. _____ % Bentonite Bentonite-cement grout ☐ 50
e. 0.804 ft³ Volume added for any of the above
f. How Installed: Tremie ☐ 01
Tremie pumped ☐ 02
Gravity ☒ 08
6. Bentonite seal:
a. Bentonite Granules ☐ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite pellets ☒ 32
c. _____ Other ☐
7. Fine sand material Manufacturer, product name and mesh size
a. #60 Red Flint
b. Volume added 0.327 ft³
8. Filter pack material: Manufacturer, product name and mesh size
a. #30 Red Flint
b. Volume added 3.27 ft³
9. Well casing: Flush threaded PVC schedule 40 ☒ 23
Flush threaded PVC schedule 80 ☐ 24
Other ☐
10. Screen material: PVC
a. Screen type: Factory cut ☒ 11
Continuous slot ☐ 01
Other ☐
b. Manufacturer U.S. Filter
c. Slot size: _____ in.
d. Slotted length: 10 ft.
11. Backfill material (below filter Pack): None ☒ 14
Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowledge

Signature [Signature] Firm REI Engineering, Inc.
4080 N. 20th Ave.
Wausau, WI 54401

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Route To Solid Waste ☐ Haz. Waste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐

Facility/Project Name Tower Standard	Local Grid Location of Well ____ Feet S. ____ Feet W. ____ Feet N. ____ Feet E	Well Name MW-22 at 35-40ft
Facility License Permit or Monitoring Number	Grid Origin Location	Wis. Unique Well Number DNR Well Number
Type of Well Water Table Observation Well <input checked="" type="checkbox"/> 11 Piezometer <input type="checkbox"/> 12	Section Location of Waste/Source <input checked="" type="checkbox"/> E	Date Well Installed 11/3/15
Distance Well Is From Waste/Source Boundary Ft.	SE 1/4 of SW 1/4 of Sec. 30, T. 40 N, R. 05 <input type="checkbox"/> W	Well Installed By (Person's Name and Firm) GESTRA - Bryan
Is Well A Point of Enforcement Std. Application <input type="checkbox"/> Yes <input type="checkbox"/> No	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	

A. Protective pipe, top elevation _____ ft. MSL
B. Well casing, top elevation _____ ft. MSL
C. Land surface elevation _____ ft. MSL
D. Surface seal, bottom _____ ft. MSL or _____ ft.

12. USCS Classification of soil near screen:

GP ☐ GM ☐ GC ☐ GW ☐ SW ☒ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis attached? ☐ Yes ☒ No

14. Drilling method used Rotary ☐ 50
Hollow Stem Auger ☒ 41
Other ☐

15. Drilling fluid used: Water ☐ 02 Air ☐ 01
Drilling Mud ☐ 03 None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No

Describe _____

17. Source of water (attach analysis):

E. Bentonite seal, top _____ ft. MSL or 1.00 ft.
F. Fine sand, top _____ ft. MSL or 30.5 ft.
G. Filter pack, top _____ ft. MSL or 32.5 ft.
H. Screen joint, top _____ ft. MSL or 34.5 ft.
I. Well bottom _____ ft. MSL or 39.5 ft.
J. Filter pack, bottom _____ ft. MSL or 40.00 ft.
K. Borehole, bottom _____ ft. MSL or 40.00 ft.
L. Borehole, diameter 8 in.
M. O.D. well casing 2.1 in.
N. I.D. well casing 1.9 in.

1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: _____ in.
b. Length: _____ ft.
c. Material: Steel ☒ 04
Other ☐
d. Additional protection? ☐ Yes ☒ No
If yes, describe: _____
3. Surface seal: Bentonite ☐ 30
Concrete ☒ 01
Other ☐
4. Material between well casing and protective pipe: Bentonite ☒ 30
Annular space seal ☐
Other ☐
5. Annular space seal: a. Granular Bentonite ☒ 33
b. _____ Lbs/gal mud weight _____ Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight _____ Bentonite slurry ☐ 31
d. _____ % Bentonite _____ Bentonite-cement grout ☐ 50
e. 9.647 ft³ Volume added for any of the above
f. How installed: Tremie ☐ 01
Tremie pumped ☐ 02
Gravity ☒ 08
6. Bentonite seal: a. Bentonite Granules ☐ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite pellets ☒ 32
c. _____ Other ☐
7. Fine sand material Manufacturer, product name and mesh size
a. #15 Red Flint
b. Volume added 1 bag ft³
8. Filter pack material: Manufacturer, product name and mesh size
a. #40 Red Flint
b. Volume added 2 bags ft³
9. Well casing: Flush threaded PVC schedule 40 ☒ 23
Flush threaded PVC schedule 80 ☐ 24
Other ☐
10. Screen material: PVC
a. Screen type: Factory cut ☒ 11
Continuous slot ☐ 01
Other ☐
b. Manufacturer Johnson Screen
c. Slot size: _____ in.
d. Slotted length: 5 ft.
11. Backfill material (below filter Pack): None ☒ 14
Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowledge

Signature *[Signature]*

Firm REI Engineering, Inc.
4080 N. 20th Ave.
Wausau, WI 54401

Please complete both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs. 144, 147 and 160 Wis. Stats. and ch. NR 141, Wis. Ad. Code. In accordance with ch. 144 Wis. Stats., failure to file this form may result in a forfeiture of not less than \$10, nor more than \$5000 for each day of violation. In accordance with ch. 147 Wis. Stats., failure to file this form may result in a forfeiture of not more than \$10,000 for each day of violation. NOTE: Shaded areas are for DNR use only. See instructions for more information including where the completed form should be sent.

Route To Solid Waste ☐ Haz. Waste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐

Facility/Project Name Tower Standard	Local Grid Location of Well ____ Feet S. ____ Feet W. ____ Feet N. ____ Feet E	Well Name MW-19 at 35-40ft
Facility License Permit or Monitoring Number	Grid Origin Location	Wis. Unique Well Number DNR Well Number
Type of Well Water Table Observation Well <input checked="" type="checkbox"/> 11 Piezometer <input type="checkbox"/> 2	Section Location of Waste/Source <input checked="" type="checkbox"/> E	Date Well Installed 11/5/15
Distance Well Is From Waste/Source Boundary Ft.	SE 1/4 of SW 1/4 of Sec. 30 T. 40 N. R. 05 <input type="checkbox"/> W	Well Installed By (Person's Name and Firm) GESTRA - Bryan
Is Well A Point of Enforcement Std. Application <input type="checkbox"/> Yes <input type="checkbox"/> No	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	

A. Protective pipe, top elevation _____ ft. MSL
B. Well casing, top elevation _____ ft. MSL
C. Land surface elevation _____ ft. MSL
D. Surface seal, bottom _____ ft. MSL or _____ ft.

12. USCS Classification of soil near screen:

GP <input type="checkbox"/>	GM <input type="checkbox"/>	GC <input type="checkbox"/>	GW <input type="checkbox"/>	SW <input checked="" type="checkbox"/>	SP <input type="checkbox"/>
SM <input type="checkbox"/>	SC <input type="checkbox"/>	ML <input type="checkbox"/>	MH <input type="checkbox"/>	CL <input type="checkbox"/>	CH <input type="checkbox"/>

Bedrock ☐

13. Sieve analysis attached? ☐ Yes ☒ No

14. Drilling method used Rotary ☐ 50
Hollow Stem Auger ☒ 41
Other ☐

15. Drilling fluid used: Water ☐ 02 Air ☐ 01
Drilling Mud ☐ 03 None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No
Describe 40 Gallons Water Added

17. Source of water (attach analysis):
Town of Minocqua

E. Bentonite seal, top _____ ft. MSL or 0 ft.
F. Fine sand, top _____ ft. MSL or 31.00 ft.
G. Filter pack, top _____ ft. MSL or 33.00 ft.
H. Screen joint, top _____ ft. MSL or 35.00 ft.
I. Well bottom _____ ft. MSL or 40.00 ft.
J. Filter pack, bottom _____ ft. MSL or 40.00 ft.
K. Borehole, bottom _____ ft. MSL or 40.00 ft.
L. Borehole, diameter 8 in.
M. O.D. well casing 2.1 in.
N. I.D. well casing 1.9 in.

1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: _____ in.
b. Length: _____ ft.
c. Material: Steel ☒ 04
Other ☐
d. Additional protection? ☐ Yes ☒ No
If yes, describe: _____

3. Surface seal: Bentonite ☐ 30
Concrete ☐ 01
Other ☐

4. Material between well casing and protective pipe:
Bentonite ☒ 30
Annular space seal ☐
5 bags _____ Other ☐

5. Annular space seal:
a. Granular Bentonite ☐ 33
b. _____ Lbs/gal mud weight _____ Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight _____ Bentonite slurry ☐ 31
d. 5 % Bentonite _____ Bentonite-cement grout ☒ 50
e. 8.69 ft³ Volume added for any of the above
f. How installed: Tremie ☐ 01
Tremie pumped ☒ 02
Gravity ☐ 08

6. Bentonite seal:
a. Bentonite Granules ☐ 33
b. ☐ 1/4 in. ☐ 3/8 in. ☐ 1/2 in. Bentonite pellets ☐ 32
c. _____ Other ☐

7. Fine sand material Manufacturer, product name and mesh size
a. #15 Red Flint
b. Volume added 1 bag ft³

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a. #40 Red Flint
b. Volume added 1 1/2 bags ft³

9. Well casing: Flush threaded PVC schedule 40 ☒ 23
Flush threaded PVC schedule 80 ☐ 24
Other ☐

10. Screen material: PVC
a. Screen type: Factory cut ☒ 11
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Other ☐
b. Manufacturer Johnson Screen
c. Slot size: _____ in.
d. Slotted length: 5 ft.

11. Backfill material (below filter Pack): None ☒ 14
Other ☐

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